

CLAIMS

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1. An ampoule for an injection or infusion apparatus, said ampoule comprising at least two recognition elements, each of which at least two recognition elements can be arranged in one of at least two predetermined positions on said ampoule, wherein said at least two predetermined positions are asymmetrical relative to the ampoule.

2. The ampoule as set forth in claim 1, wherein the at least two predetermined positions and recognition elements are arranged at one end of the ampoule.

3. The ampoule as set forth in claim 2, wherein the ampoule has a generally central axis and the at least two predetermined positions and recognition elements are arranged on a circle concentric with respect to the axis.

4. The ampoule as set forth in claim 1, wherein a plurality of predetermined positions are provided in which the at least two recognition elements can be arranged.

5. The ampoule as set forth in claim 1, wherein a plurality of recognition elements are provided.

6. The ampoule as set forth in claim 1, wherein at least one of the at least two recognition elements is arranged at a particular predetermined position.

7. The ampoule as set forth in claim 1, wherein at least one reference recognition element is provided on the ampoule.

8. The ampoule as set forth in claim 7, wherein a plurality of reference recognition elements are provided.

9. The ampoule as set forth in claim 7, wherein the ampoule has a generally central axis and said at least one reference recognition element is provided along a circle concentric with respect to the axis.

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10. The ampoule as set forth in claim 1, wherein the at least two recognition elements are based at least one principle of a group consisting of electrical, magnetic, inductive, capacitive and mechanical principles.

10 11. The ampoule as set forth in claim 10, wherein the at least two recognition elements are at least one of a group consisting of magnets, conductive structures, optical structures and surface structures.

12. The ampoule as set forth in claim 1, wherein the at least two recognition elements
15 generate one of electrical and magnetic fields of different strengths.

13. The ampoule as set forth in claim 1, wherein the recognition elements may be written on.

14. An administering device which may be coupled to an ampoule comprising at least two
20 recognition elements, each of which at least two recognition elements can be arranged in one of at least two predetermined positions on said ampoule, wherein said at least two predetermined positions are asymmetrical relative to the ampoule, said administering device comprising at least two sensors at predetermined positions in order to recognize the arrangement of the at least two recognition elements at the predetermined positions.

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15. An administering device which can be coupled to an ampoule comprising at least two recognition elements, each of which at least two recognition elements can be arranged in one of at least two predetermined positions on said ampoule, wherein said at least two predetermined positions are asymmetrical relative to the ampoule, said administering device comprising at least
30 one sensor which can be moved relative to the ampoule.

16. The administering device as set forth in claim 15, wherein said sensor can be moved around the ampoule.

- 5 17. The administering device as set forth in claim 14, comprising a thread aligned with one of the ampoule or an end stopper for defining a final coupled position of the ampoule relative to the administering device.
18. The administering device as set forth in claim 14, comprising at least one positioning
10 element for positioning the sensors in the administering device.
19. The administering device as set forth in claim 14, comprising a device for transferring signals between the recognition elements and the sensors.
- 15 20. The administering device as set forth in claim 14, wherein the sensors are one of a group consisting of Hall sensors, optical sensors, electrical sensors and mechanical sensors.
21. The administering device as set forth in claim 20, wherein the sensors are contact
20 switches.
22. The administering device as set forth in claim 14, comprising a motor for automatically inserting or turning in the ampoule.
23. The administering device as set forth in claim 14, comprising at least one multiplexer
25 which is connected to the at least two sensors.
24. The administering device as set forth in claim 14, comprising a display device for displaying a type of ampoule detected by the sensors.
- 30 25. An administering system comprising:
an ampoule comprising at least two recognition elements, each of which at least two recognition elements can be arranged in one of at least two predetermined positions on said ampoule, wherein said at least two predetermined positions are asymmetrical relative to the ampoule; and

5 an administering device which may be coupled to the ampoule, said administering device comprising at least two sensors at predetermined positions in order to recognize the arrangement of the at least two recognition elements at the predetermined positions.

26. An ampoule for use with an administering device such as an injection or infusion
10 apparatus, at least two recognition elements associated with the ampoule, each of which at least two recognition elements can be arranged in one of at least two predetermined positions relative to the ampoule, wherein the at least two predetermined positions are asymmetrically located relative to the ampoule.

15 27. The ampoule in accordance with claim 26, wherein the administering comprises at least two associated sensors at predetermined positions in order to recognize the arrangement of the at least two recognition elements.

28. The ampoule in accordance with claim 26, wherein the administering device comprises
20 at least one sensor which can be moved relative to the ampoule.

29. An administering device such as an injection or infusion apparatus and an ampoule for
use with the administering device, wherein the ampoule comprises at least two associated
recognition elements, each of which at least two recognition elements can be arranged in one of
25 at least two predetermined positions relative to the ampoule, wherein the at least two
predetermined positions are asymmetrically located relative to the ampoule.

30. The administering device according to claim 29, wherein the administering device
comprises at least two associated sensors at predetermined positions in order to recognize the
30 arrangement of the at least two recognition elements associated with an ampoule.

31. The administering device according to claim 29, wherein the administering device
comprises at least one sensor which can be moved relative to an ampoule.